



# Powder-Actuated Tools

Also known as explosive-actuated tools or direct fasteners, powder-actuated tools are a type of gun that drives nails, studs, or other specialized fasteners to join materials. Powder-actuated tools use a small chemical propellant charge to create a controlled explosion similar to a firearm – operators should treat powder-actuated tools with the same caution they would a loaded gun.



## Safety Precautions

The Occupational Safety and Health Administration (OSHA) outlines guidelines for using powder-actuated tools.

- Always inspect the tool before using it. Test the tool each day before loading it, in accordance with the manufacturer's recommended procedure, to make sure safety devices are working properly.
- Make sure tools meet applicable requirements of American National Standards Institute standard A10.3-1970, Safety Requirements for Explosive-Actuated Fastening Tools.
- Use tool only after being trained to operate it.
- Don't use the tool in an explosive or flammable environment.
- Don't load the tool unless you plan to use it immediately.
- Never leave a loaded tool unattended.
- Keep hands away from the tool's barrel end.
- Never point the tool at anyone.
- Wear appropriate personal protective equipment (PPE), such as eye, ear, gloves, and face protection.
- Make sure the powder level of the tool, whether high- or low-velocity, is appropriate and will work without excessive force.
- Check that the muzzle end of the tool has a protective shield or guard on the barrel to confine any fragments or particles that are projected when the tool is fired. A tool containing a high-velocity load must be designed not to fire unless this type of guard is in place.

## In Case of a Misfire

The operator must hold the tool in the operating position for at least 15 seconds and continue to hold the muzzle against the work surface during disassembly or when opening the tool and removing the powder load.

## Applying Fasteners

If applying fasteners, follow these additional safety precautions:

1. Don't put a fastener in any material that will allow it to pass through to the other side.
2. Don't put fasteners into hard or brittle material that could chip or splinter – doing so could cause the fastener to ricochet. Such materials include cast iron, glazed tile, surface-hardened steel, glass block, live rock, face brick and hollow tile.
3. Always use an alignment tool when shooting fasteners into existing holes.
4. If using a high-velocity tool, don't drive fasteners closer than 3 inches to an unsupported edge or corner of material such as brick or concrete.

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